# Environmental Financial Advisory Board



# Barriers and Incentives to Financing Brownfields Cleanup and Reuse

**Brownfields Report No. 5**

This report has not been reviewed for approval by the U.S. Environmental Protection Agency; and hence, the views and opinions expressed in the report do not necessarily represent those of the Agency or any other agencies in the Federal Government.

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# I. INTRODUCTION

## A. MARKETABILITY FOR PRIVATE USE

This report complements a series of four others issued since September 1995 by the Environmental Financial Advisory Board (EFAB) concerning brownfields redevelopment. The report focuses on the marketability of brownfields properties for private, economic reuse. It addresses questions such as:

> *What are the principal barriers that limit financing the restoration of these properties for private sector uses? And, what are the incentives likely to be effective in removing these barriers to financing?*

The report first reviews the macroeconomic, site-specific, environmental, and regulatory factors that affect brownfields site marketability. It then examines specific regulatory and other barriers to the cleanup and reuse of these properties. Within this examination, it presents incentives and approaches that governments, particularly State ones, are taking to overcome the barriers. Finally, it draws conclusions based on this examination and presents possible next steps.

Although the report focuses on private reuse, EFAB recognizes that there are many instances where public reuses for brownfields properties are both more valuable and more appropriate. Examples of public reuses include park, recreation, river corridor greenway, natural area conservancy, historic preservation, and cultural education uses. Such public reuses can and do have great esthetic, psychological, health, sociological, and community benefits. However, they are generally not revenue generators, have little direct real estate value, and must be almost entirely funded by a public and/or private endowment. Because of the total subsidy nature of public reuses, they are not examined in this advisory. Further examination of them merits attention, though, and could be a topic for future study.

## B. FACTORS THAT AFFECT SITE MARKETABILITY

While the term, "brownfields," has become one of general usage in the discussion of public policies regarding the large numbers of former industrial or commercial properties that are or may be contaminated, brownfields encompass a wide array of properties throughout the country, the particular characteristics of which vary significantly from site to site. .It is important to recognize this variation, as it affects the relative importance of a site's potential or actual contamination to the site's potential reuse. The brownfields definition employed in this advisory is the one used by the U.S.. EPA -- "abandoned, idled, or under-used industrial and commercial sites where expansion or redevelopment is complicated by real or perceived environmental contamination."

## 1. MACROECONOMIC FORCES

Brownfields sites tend to be geographically concentrated within specific regions, States, and metropolitan areas. This relative concentration of brownfields properties reflects the prior history of industrial and commercial activities in particular areas. It also reflects a number of basic changes that have occurred, and are continuing to occur, in our Nation's political and economic landscape. Some of the basic forces at work include:

- the relocation of industrial production within the United States and to other countries;
- the continuing introduction of new technologies in many industrial and commercial sectors;
- the maturing of certain industrial sectors, and the leveling or decline in demand for certain goods and services;
- the aging, retirement, and relocation of large numbers of the Nation's workforce and population;
- the competitive need of private enterprises to cut business costs, including the costs of owning or leasing and operating large plants, offices, and other facilities;
- the demands facing governments to be more efficient in their operations and methods of providing services; and
- the need for governments to reduce expenditures, including real estate related capital and operating expenses, to conform more closely with revenues.

These large-scale forces at work in the Nation's political economy have contributed to large numbers of brownfields properties in many of our cities and communities. This report recognizes the reality of these large economic and political forces that affect the supply, use, and demand for all types of property and buildings, including brownfields.

## 2. SITE-SPECIFIC FACTORS

There are also many, local, site-specific factors that affect the potential demand for the reuse of particular brownfields properties. These local factors can include:

- site location and accessibility;
- site size and configuration;
- site improvements and structures and their relative utility (obsolescence);
- area infrastructure, especially transportation, that serves the site;
- local zoning and the likelihood and type of rezoning;
- State and local tax burden on the property or applicable to site activities;
- availability, cost, and skill of labor for construction or business operations at the site;
- public and private utility rates;
- availability and cost of property and liability insurance;
- availability and cost of crime insurance and degree of public safety at the site;
- regulatory agency process(es);
- process and timing of obtaining entitlements; and
- political or community position(s).

It is clearly understood that these are only some of the important considerations that normally determine or influence the appraisal of the market value of property and/or the evaluation of the feasibility of an economic reuse of property.

## 3. ENVIRONMENTAL AND REGULATORY CONSIDERATIONS

In addition to macroeconomic and non-environmental, site specific factors, there are multiple environmental and regulatory considerations that may influence the prospects for redevelopment of any specific brownfields property. The number and importance of these considerations, or any one of them, depends on the type of reuse being considered. Generally, industrial or large-scale commercial uses present the most complex matrix of considerations. In addition to potential contamination of soil and structures on a property, the following environmental conditions may need to be evaluated:

- air quality and transportation congestion;
- probability of obtaining required permits;
- surface water quality;
- probability of obtaining direct discharge permits and pretreatment costs, if discharge into a public sewerage system is planned;
- drinking water quality;
- availability and cost of land filling demolition debris;
- availability, quality, and cost of water needed for industrial processes;
- availability and cost of solid waste and hazardous waste disposal; and
- ambient noise and noise standards.

The interplay among these environmental conditions and the federal, State, and local regulatory actions applicable to them can significantly affect the potential reuses of brownfields properties, particularly those where industrial or commercial reuses are desired.

Regulatory action under one program with respect to one medium or environmental condition clearly can affect the likelihood of a particular, proposed reuse of a brownfields property. But, the coordinated consideration of potential regulatory actions under different programs or media is likely to be essential, if the full range of potential, economic and community revitalization benefits of brownfields cleanup and reuse is to be explored. An interprogrammatic balancing of both environmental and economic benefits with the environmental and economic costs of a proposed brownfields redevelopment may result in the finding that net benefits across regulatory programs outweigh net costs. Amendment of regulatory authorities should be undertaken to permit this kind of coordination and balancing of considerations, benefits, and costs.

The hypothetical location on a brownfields site of a paper mill that relies on waste paper for feedstock can illustrate the potential benefit of this approach. Matching cleanup standards to site use, or passing a bond issue to help pay for cleanup costs, may allow the mill to locate on the site and even make it economically feasible for the mill to pay for necessary land, water, and air quality compliance. A potential "win-win" under more than one program.

Inconsistencies between federal, State and local laws and regulations and their implementation can also have a significant impact on the probability of the cleanup and reuse of brownfields sites. For lenders, investors, developers, and others involved in the brownfields redevelopment process, multi-jurisdictional inconsistency translates into uncertainty which translates into unknown time frames and unknown costs and leads to decisions not to pursue projects. If governments wish to encourage brownfields redevelopment, they must find ways to solve or, at least, alleviate this serious problem wherever and however possible. Intergovernmental agreements and/or true delegations of regulatory authority would represent a good first step.

# II. BARRIERS ASSOCIATED WITH BROWNFIELDS AND INCENTIVES THAT ADDRESS THEM

Barriers to the cleanup and reuse of brownfields properties include both regulatory barriers, that may arise under environmental regulatory programs applicable to soil and related water source contamination from the release of hazardous substances, and non-regulatory barriers attributable to other, more generic factors. With budgets at all levels of government constrained or becoming so, the need to address both types of barriers in order to make private capital more available for brownfields cleanup and reuse has become well recognized.

## A. REGULATORY BARRIERS AND INCENTIVES

Regulatory barriers discussed include:

- the exposure to liability for cleanup costs of innocent or non-responsible parties and of parties responsible for contamination, and *(note that our use of these terms may not as precise as the legal definitions under CERCLA which, of course, must apply)*;
- the standards that cleanup actions must meet; and
- the timeliness of administrative reviews, approvals, and other actions by the environmental regulators with jurisdiction over the cleanup.

### 1. LIABILITY EXPOSURE

The scope of exposure for cleanup liability significantly impacts the availability of both private and public sector capital to finance cleanups and reuse. This risk of liability has multiple sources. It can arise under federal statutes -- primarily the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) or the Resource Conservation and Recovery Act (RCRA); both federal and State statutory law; and both State statutory and common law. The financial risk may be one of liability to the federal and/or a State government, or to a private, third party that either shares the risk of cleanup liability or is potentially harmed by the site contamination.

This dual jurisdiction of the federal and State governments raises the problem of regulatory second-guessing. Can parties rely upon a State agency approval under State law, if the federal government continues to have jurisdiction, whether it acts through the federal EPA under CERCLA or RCRA? A practical solution to this problem, common under our federal form of government, is needed. Pending Congressional action, interim solutions can help. For example, the memoranda of understanding between U.S. EPA's Region V Office and the States of Illinois, Minnesota, and Indiana defining the terms under which federal EPA generally will not second guess the States actions under voluntary cleanup programs represent useful and feasible administrative actions. Although to have such an agreement is better than to not; the question remains whether such action provides sufficient comfort on this issue.

The following discussion first reviews, as a backdrop, liability for cleanups under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund. It then considers the liability of parties involved in brownfields site cleanup and reuse -- innocent or non-responsible parties and responsible parties respectively. The discussion concludes with a look at the risks of liability that may still remain following a regulatory agency approved, voluntary, or other cleanup action.

**a. Potentially Responsible Parties Under Superfund**

Superfund imposes liability when there is a release or threatened release of hazardous substances. Potentially responsible parties (PRPs) are individuals or companies who may be responsible for all or part of the contamination at a Superfund site. PRPs include:

- present owners and operators of a Superfund, even if they did not contaminate the property;
- past owners and operators of the facility where hazardous substances were disposed of improperly;
- persons who arranged for the treatment, disposal, or transportation for treatment or disposal of hazardous substances at the site; and
- persons who transported hazardous substances to disposal or treatment facilities that they selected.

This wide net of potential liability at Superfund sites casts a shadow on the liability concerns at all brownfields properties. Since one can never be 100% sure about the amount of contamination at any site, then every brownfields (contaminated site) represents a possible Superfund site to some degree or another, with the accompanying liability concerns. The next two sections address non-responsible and responsible parties involved in brownfields properties.

**b. Non-Responsible Parties**

Non-responsible or innocent parties generally may include prospective purchasers of brownfields properties, commercial banks or other sources of private credit, municipalities (political subdivisions of the States or their agencies), and utility companies that may have, or wish to install, service facilities crossing a brownfields. If any of these parties become involved in a brownfields redevelopment, they face the financial uncertainty of becoming responsible for damages caused to third parties by contamination, costs associated with the cleanup and, after the cleanup, unknown costs relating to any undiscovered contamination.

The more clearly a party's innocence or non-association with the contamination of a brownfields site, the more likely the regulatory agency will determine that accommodation of the party is appropriate to induce the party to contribute capital to the cleanup and reuse of the site. Such accommodation currently occurs under both federal and State law with respect to prospective purchasers and municipalities that acquire brownfields properties involuntarily via foreclosure of tax liens, abandonment, or similar means.

The manner in which non-responsible parties are accommodated varies between the federal and State governments and among the States. While the Congress has been considering legislative changes to Superfund during the past three years, federal EPA has acted under current law to issue revised guidance regarding the conditions to entering into agreements with prospective purchasers limiting their risk of liability for existing contamination. In addition, since the enactment of the "CERCLA Lender and Fiduciary Liability Limitations Amendments" in September 1996, U.S. EPA has been developing policy guidance for lenders with regards to their situation under the new law.

States vary in their responses to the liability concerns of non-responsible parties. The most common response, whether by recent legislative action or administrative interpretation of existing law, has been the issuance of a comfort letter commonly called a "no further action" letter (NFA letter), a certificate of completion, or an administrative order or agreement that includes a covenant-not-to-sue (CNTS). Some States will provide either depending on the specific circumstances. States issuing NFAs include Oregon, Minnesota, Illinois, Ohio, New Jersey, and Massachusetts. States issuing CNTS include Oregon (pursuant to a consent order), Michigan, Ohio (following agency review of a NFA issued by a licensed site professional), and Massachusetts (in targeted economic development areas).

While the prospective purchaser receiving a NFA or CNTS obtains administrative assurance on the potential risk of future State enforcement action against it, the State normally obtains from the prospective purchaser an agreement to contribute capital to fund cleanup of the brownfields site. While requiring such an agreement may be an incentive in that it buys the prospective purchaser a limit on potential liability, it also represents a barrier in that it reduces the capital that the purchaser can use for ordinary redevelopment purposes.

Many States have also enacted their own statutory clarifications or limitations of lenders' liability risk. Many of these State laws resemble the April 1992 lender liability rule issued by federal EPA which was later suspended by court action, and finally embodied in federal law in September 1996.

Some States, including Wisconsin and Michigan, have clarified the liability risk of municipalities. Wisconsin and Michigan have defined the circumstances in which the purchaser of a brownfields property from a municipality succeeds to the municipality's liability protection. Massachusetts has clarified the liability risk of utility companies that may disturb soil conditions as part of utility service improvements within rights of way that cross brownfields.

Minnesota is among the States with the most nuanced set of responses to nonresponsible parties. In addition to the types of assurance provided elsewhere, Minnesota may issue a "good neighbor" letter providing assurance against State action to owners of properties that become contaminated by an off-site pollution source, and a "no-association" letter that provides similar assurance to a purchaser, where the purchaser does not intend to alter an existing use or structure and does not aggravate historical contamination at the site. Virginia reports that it offers four of the five types of assurances provided by Minnesota.

Many innocent or non responsible parties and others believe that the current system of holding all parties as potentially responsible (i.e. liable) through regulatory determination to be inherently unfair. These parties argue that a non-responsible party is just that, not responsible, and should be accorded presumptive innocence. They further assert that there should be a full spectrum of liability ranging from presumptive innocence (0%) through known responsible (100%). Such a change could represent a great incentive for investment in brownfields properties, but also could shift the burden of paying for the cleanup of contaminated sites to the general public.

**c. Responsible Parties**

A common problem with respect to brownfields is the disincentive of the responsible party (ies) to undertake cleanup. The disincentive usually derives from the risk that the responsible party may not recover cleanup costs from the sale, lease, or reuse of the property. The more distressed the local land market, the higher the likelihood that this risk is significant, and that the site owner or operator may have gone out of business and, therefore, has limited resources to finance a cleanup. States and local governments are increasingly focusing on this disincentive and attempting to address it. The means used include those discussed in the following paragraphs.

If the responsible party is financially viable or has sufficient resources to contribute to the cleanup, the threat of enforcement action by the environmental regulator(s) provides a potentially useful "stick." The less viable the responsible party, and the less contaminated the site, the less likely this is a meaningful incentive to the responsible party.

Many responsible parties are reluctant to even find out what a cleanup would cost for fear that information regarding site contamination would have to be disclosed to regulators and become a basis for enforcement action. Several States, including Virginia, have recently addressed this concern by providing that the information obtained from the owner's site investigation may be considered confidential. Ohio extends this privilege to all information that may be generated during a voluntary cleanup action. But, it should be recognized that the longer term reality is that contamination problems for which they are responsible will eventually catch up with them or their heirs.

If the owner or other responsible party is financially able to fund all or a portion of the cleanup and volunteers to do so, it may receive a comfort letter or covenant not to sue from the State regulator similar to that offered a non-responsible party. Minnesota, for example, will provide a certificate of completion that is like a CNTS with respect to contamination that is fully investigated and disclosed to the State. A responsible party can obtain a CNTS from Michigan or Oregon, if it enters into an administrative consent order.

The liability protection of a prospective purchaser and its lender may be sufficient to induce the availability of capital to acquire the brownfields property from the responsible party, at least in those circumstances, where the local land market supports the feasibility of a new use. Pennsylvania has a buyer/seller program that provides this form of incentive.

States are also beginning to provide financial incentives to encourage responsible parties to conduct brownfields cleanups. For example, Minnesota sets a lower property tax rate on a brownfields property that is cleaned up than it does on contaminated property. Ohio gives a ten-year abatement of State property taxes on the increase in value attributable to the cleanup and authorizes local governments to allow similar abatement of real and personal property taxes.

Connecticut is unique in authorizing the State to acquire title to, or a mortgage on, a brownfields property in an economically distressed, urban area, undertake cleanup, and recover its cleanup costs from the sale or lease of the property and pursuit of cost recovery actions against responsible parties. In this situation, the State may fully fund the cleanup cost before or after seeking cleanup action by, or contributions from, the responsible parties. This is a powerful mechanism whose full benefit might be felt if undertaken at multiple levels of government, including counties and municipalities.

Other financial incentives being considered would reduce cleanup costs via grants, loans, loan guarantees, and interest subsidies. New Jersey provides low interest loans to responsible parties, and grants to certain responsible parties financially unable to fund a cleanup through other means.

Notwithstanding these incentives, responsible parties remain concerned with the risk of liability to private third parties resulting from site contamination or the contamination's spreading to an adjacent property. States are beginning to address this risk. A potentially responsible party that completes a voluntary cleanup in Indiana receives a CNTS from the State intended to protect them from third party claims resulting from the contamination addressed. Michigan provides similar protection to responsible parties undertaking cleanups at sites with "orphan" shares.

**d. Risk of Residual Liability**

Even following a cleanup, the risk of residual liability for further cleanup may remain. Most States, for example, will carve out from the NFA or CNTS the State's right to bring an enforcement action with respect to contamination knowingly not addressed by the approved cleanup action or later discovered contamination that was not disclosed to the State. The first circumstance arises in States, such as Oregon, Minnesota, and New Jersey, that allow cleanups of parts of brownfields properties.

There is significant tension between regulatory agencies and non-responsible or responsible parties regarding the scope of "reopener" provisions or residual cleanup risks following a cleanup action. Regulators typically are concerned with unknown or inadequately addressed contamination and want to reserve the right to take action in the event of fraud, undiscovered contamination, or a change in cleanup technologies. There can be other "reopeners" as well. Those potentially liable for further cleanup are concerned with unknown or unquantifiable, future costs and want to limit, be certain about, future risks to the maximum extent feasible.

While both non-responsible and responsible parties are subject to, "reopeners", some States believe there is merit in treating each group differently. The innocence of non-responsible parties may be especially compelling with respect to undiscovered contamination. Some type of governmental assurance in this situation such as liability protection from the State would be valuable in encouraging new non-responsible party investment in the redevelopment of brownfields properties. An good example of this is the reopener protection offered by the State of Texas in the form of liability relief.

One means of addressing residual risks being considered in a number of States and localities is a State or local insurance pool funded by private parties or by both private and public capital contributions. Such a pool would provide insurance to non-responsible parties and possibly responsible parties for certain, limited residual risks, such as:

- discovery of contamination, where prior investigation had been thought adequate;
- future changes in regulatory cleanup standards; or
- the application of newly discovered cleanup technologies to prior cleanup sites.

## 2. CLEANUP STANDARDS

If a responsible or non-responsible party is able to determine its liability risk with reasonable certainty, it next will consider the questions:

- What are the cleanup standards that apply?
- What will it cost to comply with them?

The conservative risk assumptions and ambitious goals historically used in establishing cleanup standards for soil contamination and/or the uncertainty regarding the standards has increased the cleanup costs and the time required to perform cleanups.

Cleanup standards under State regulatory programs are evolving rapidly. The Congress must determine whether or not Superfund reform (if it occurs) will include significant changes in federal cleanup standards. In general, cleanup standards involve three analytical aspects:

- establishing the assumptions for defining the risks of contaminants to human health and the environment;
- establishing the acceptable risk of human fatality due to carcinogenic and noncarcinogenic contaminants; and
- defining the spectrum of cleanup methods or technologies that are appropriate for, or acceptable to address, particular contaminants or types of contaminants.

Current policy changes regarding cleanup standards appear most focused on the first and third of these three aspects.

### a. Defining Public Health/Environmental Risks

The most significant dynamic in risk assessment appears to be the general movement of State regulators to allow risk-based, site-specific, and use-based risk assessments. This translates into a risk assessment methodology that:

- substitutes, where appropriate, for prior, conservative "default" assumptions based upon data that characterize the specific soil, geologic, and hydrologic conditions of a brownfields site;

- considers the probable fate and transport of the specific contaminants at the site relative to the probable pathways by which members of the public would be exposed to such contaminants; and

- takes account of the probable future use of the site that is permitted under local land use regulations.

Particularly significant to this risk assessment is the consideration of the risk of contamination of groundwater that is or may become a public drinking water supply.

States appear less inclined to move away from human fatality risk factors that the federal EPA has applied to date. A consensus appears to exist among most States to apply a fatality risk factor of one cancer death in 1,000,000 persons potentially exposed and an hazard risk factor for non-carcinogens of 1. Some States distinguish between the risk factor for an individual contaminant and the cumulative risk factor for all contaminants.

Oregon and Massachusetts, for example, allow an individual factor of 1 in 1,000,000 and a cumulative factor of 1 in 100,000. Ohio allows the permitted risk factor to be based on site use: 1/1,000,000 for residential; 1/100,000 for commercial; and 1/10,000 for industrial. In 1993, the New Jersey Legislature called for a two-year study of whether to vary from the 1/1,000,000 risk factor.

### b. Addressing/Mitigating Risks

Typically permitted, alternative risk assessment methods involve the use of assumptions that either take account of background, environmental conditions within the area of the site or generic, numerical standards and assumptions regarding various factors or site conditions. The basic issue for the responsible or non-responsible party to consider is if the costs associated with developing and applying a risk-based, site-specific, and use-based assessment are less than the costs associated with the background or generic risk assessment methodologies. The answer to this question will depend upon factors that include the timeliness of the environmental regulator's administrative review process discussed below.

A central theme to the changes occurring with respect to permitted cleanup methods is the increasing willingness of regulators to allow interim or non-permanent, used-based cleanups. These include various methods of containment of contaminants to limit or prevent their movement along pathways to human exposures, especially to groundwater that is, or is likely to become, a public drinking water supply. Cost and technical feasibility normally must be taken into account in determining the appropriateness of a cleanup method or remedy. While finality of the cleanup remedy is normally sought, the movement toward use-based cleanups is likely to defer the ultimate achievement of that goal, at least in those instances where the next probable use is not residential in nature.

Controlling cleanup costs is not simply attained through use-based cleanup standards, but also by allowing phased cleanups and/or partial site cleanups. Both are potential ways of achieving the regulator's goal of addressing environmental/health factors to allow a contemplated site use, as well as the responsible or non-responsible party's goal of reducing costs. Minnesota is among the States with sophisticated administrative actions that allow phased and/or partial site cleanups. New Jersey allows cleanups and transfers of up to one-third of a site. Oregon allows cleanups of utility rights-of-way across a brownfields site.

The appropriateness of phased or partial site cleanups depends upon the specific contamination at a brownfields. Whether the ultimate, long-term cleanup cost is reduced by phased or partial site cleanups depends on several variables, including the need, if any, for additional site cleanup, the fate and transport of contaminants pending their cleanup, the timing of cleanup, and the discount rate assumed in estimating the long-term cost.

When regulators allow use-based, phased, or partial site cleanups, they seek administratively enforceable agreements and institutional controls on the site to assure that risks will be managed and the public health protected. One risk they assume is that the financial condition of the responsible or non-responsible parties may change. If and when a brownfields site's use is changed or another phase or portion of the site needs to be cleaned, these may not have the financial resources to honor statutory liability or administrative agreement. This risk is a very real financial risk to the government -- i.e., the citizenry.

## 3. TIMELINESS OF REGULATORY ACTION

Regulatory timeliness is a critical interest of both private and local public parties involved in brownfields cleanups. The time required for a cleanup represents both opportunity and operating costs to these parties. The private sector's opportunity cost depends on their evaluation of the dynamics of the local land market and any other market in which they are considering an alternative investment. The longer the cleanup process, the larger the potential number of alternative investments and the greater the potential opportunity costs.

There are several means by which environmental regulators can reduce the time required to achieve the cleanup and reuse of brownfields properties. These include:

- modifying the agency review process;

- using private sector parties to perform oversight roles previously performed by agency staff allowing phased or partial site cleanups;
- coordinating the permitting process under all applicable regulatory programs;
- providing for timely participation by the locally affected public in the administrative review process;
- speeding cleanups of conditions that most threaten public health and, if unattended, are most likely to aggravate ultimate cleanup costs; and
- conducting voluntary cleanups with little or no oversight with completion reviews and sign-offs.

**a. Degree of Review/Oversight**

States are implementing or considering a variety of changes in their administrative procedures to facilitate more timely cleanups. Many are moving to fund adequate agency staff by charging fees to parties conducting cleanups. States are also altering their review procedures to focus more attention and resources on the most critical steps in the process. Some States are considering delegating certain review functions to local governments as is done in other environmental programs. In California, for example, the underground storage tank program is delegated to county and municipal health departments and fire departments.

Ohio and Massachusetts have moved further by allowing private, licensed site professionals to perform some functions previously performed by agency staff. Massachusetts allows this for lesser contaminated sites that can be easily cleaned up in a year or less. Ohio relies on licensed site professionals at a broader spectrum of contaminated sites. Both States intend to audit the privately supervised cleanups to assure program integrity. It is not yet clear that lenders and developers will accept a sign-off from a private party unless it has the same force and effect as that of the State.

Oregon, Minnesota, and New Jersey allow phased or partial site cleanups that take into account site reuse or redevelopment plans. This is allowed when a private party is only interested in developing part of a site, and conditions at the entire site are adequately investigated to confirm that users of that part are not threatened by conditions at the rest of the site. The site is split into parcels, allowing cleanup and development of the desired parcel, leaving those that remain for future resolution. Phased or partial site cleanup not only reduces the time required, but also reduces the immediate cleanup cost where contamination is not isolated at the portion of the site being reused.

The value of coordinating the permitting process under multiple environmental programs can be shown by a pilot project that the New Jersey Regional Plan Association office worked with U.S. EPA and the New Jersey Department of Environmental Protection and Energy regarding the cleanup and redevelopment of a large landfill site in Elizabeth, New

Jersey. Coordinating the permitting process cut the time required to one year, significantly less than what was likely without coordination. Ohio now has a consolidated standards permit that is applicable to all approvals required for the voluntary cleanup and reuse of a brownfields site, where separate permitting under State programs previously was required.

**b. Public Participation**

Public participation in the agency review process is guaranteed in many States. For example, Oregon and Minnesota require public notice and comment of proposed approvals under their voluntary cleanup programs. Ohio requires public notice and hearing with regard to certain proposed regulatory waivers. Pennsylvania requires public notice and involvement, when a cleanup is to be undertaken pursuant to a site specific, risk-based assessment.

Participation in the State agency review process by members of the locally affected public, particularly if well organized at the outset, can identify issues quickly and reduce the time required for cleanup -- if the public feels that they are involved in a process, where their views will be fairly heard and fully considered. Few States, other than Pennsylvania, have institutionalized procedures providing for a stakeholder consensus development-type process.

Federal Superfund Program removal actions have proven the efficacy and cost effectiveness of immediate attention to contamination conditions that most threaten the public health or which, if left unattended, are most likely to aggravate final cleanup costs. While contamination at many brownfields is not likely to present the same threat, analogous benefits may be obtained by removing the most threatening conditions existing at a property. An abandoned industrial facility, for example, may contain electrical equipment that, if vandalized or exposed to fire, would aggravate contamination. State funded or assisted removal actions at brownfields properties could prevent this and reduce the time and cost of cleanup.

## B. NON-REGULATORY BARRIERS AND INCENTIVES

As already noted, many parties are deterred from entering or creating a market for brownfields properties. These parties include prospective purchasers and their sources of credit or capital, lenders and/or investors. They also include owners of properties who are reluctant to determine the extent of contamination due to fear of possible enforcement action and, thus, elect instead to hold their properties off the market. In short, the market in brownfields properties does not include all potential parties and all potential properties that a more efficient market might. How can the market become more efficient or more inclusive?

The non-regulatory barriers to greater efficiency and depth include:

- the lack of adequate, readily available information regarding the existence and extent of contamination of brownfield properties;

- the lack of available capital to fund the redevelopment of brownfields properties following their cleanup; and

- the time required to obtain various permits and approvals at different levels of government from agencies other than the environmental regulators.

## 1. AVAILABILITY OF SITE INFORMATION

The basic issue regarding site information availability is: Do potential purchasers and their sources of capital, as well as sellers and affected local and other governments, know what brownfields properties are available for sale, lease, or redevelopment and the probable extent of contamination, if any, of such properties?

### a. No Information Available Except That Known by Site Owner

In many cases, information on whether a property may be available and the extent of environmental contamination is known only to the owner, who may wish to "sit on" or "mothball" the property. Many private parties and local governments are seeking to obtain and, in the case of local governments to disclose, greater information about the extent of contamination of brownfields properties.

Some States -- New Jersey, Connecticut, and Illinois, for example -- have varying forms of disclosure or disclosure and cleanup laws applicable to contaminated properties. But, the interest in the availability of greater information exists in States both with and without such disclosure laws.

### b. Responses to Interest in More Site Information

Responses to private and local public interest in greater availability of information on brownfields properties include funding by federal, State, or local agencies of environmental site assessments of both publicly and privately owned sites. Many local governments, while sharing the liability concerns of private owners, are undertaking surveys to determine the condition of their own property portfolios. These surveys, however, are not in all cases limited to publicly owned properties. Examples of ongoing efforts include Michigan's funding of site assessments on an area-wide basis, and federal EPA's providing various California cities with valuable technical assistance in performing site assessments.

Another response that could facilitate the more timely coordination of governmental action on brownfields cleanup and reuse is the integration of publicly available information in federal, State, and local government databases. Local governments often make zoning and other land use decisions without the benefit of publicly available data held by federal and State environmental regulators. This lack of database integration is confirmed by the keen interest of local governments in obtaining Phase I surveys of their brownfields properties. As use-based cleanups become more common, States could also benefit from an integration of local land use data with their regulatory program data.

Many potential sources of credit or capital (large banks, investment funds, etc.) have also developed very sophisticated environmental risk avoidance or management screens that

### a. Interagency Coordination

Coordination and cooperation among different levels of government and among agencies at each involved level will be necessary to assure more timely actions. This might involve the local zoning regulator cooperating with the State environmental regulator, or the local redevelopment authority with the State economic or community development agency, or it might involve the local tax assessor cooperating with the local redevelopment authority, or the State treasurer with the State community development agency.

### b. Public Participation

As public participation is likely to be required or contemplated under many different programs, coordination among agencies that allow or expect such participation is needed to assure both meaningful participation and timely, ultimate agency actions. Coordination of public participation in a local zoning action with public participation in a State environmental regulatory review, for example, can enhance timeliness and minimize misunderstanding in the consideration of interrelated, land use issues.

# III. SUMMARY

The successful cleanup and reuse of the nation's numerous contaminated brownfields properties represents a significant challenge to both the public and private sectors. This challenge is complex and solutions are proving difficult and costly. Nevertheless, private parties and federal, State, and local governments are working hard towards solutions that are both environmentally and economically sustainable.

Factors affecting the marketability of brownfields properties include:

- large-scale forces embedded in the Nation's economic and political landscape;
- site-specific factors that make each brownfields property a unique challenge;
- environmental and health variables that are both costly to define and to solve;
- a complex, shared, and sometimes unwieldy regulatory system that reflects our federal system; and
- public fears/expectations regarding environmental quality and protection of health.

**Regulatory Barriers and Incentives**

This paper has focused in some depth on the finance problems and issues associated with the existing environmental regulatory system and the steps being taken to address them. While confirming that liability concerns represent a very significant and continuing barrier to financing brownfields redevelopment, it has also identified and examined many of the innovative steps that Federal, State, and local governments working in cooperation with the private sector are taking to address these concerns.

Noteworthy government approaches outlined in the paper include the voluntary cleanup programs being undertaken by many States; the federal EPA Region V's memoranda of understanding with States defining the terms under which they will not second guess State actions under their voluntary cleanup programs; State provisions of limited liability protection through instruments such as covenants-not-to-sue, no further action letters, and/or certificates of completion; and State assumption of liability.

Notwithstanding these and other actions being taken by the public and private sectors, more actions are needed to address liability concerns if significant brownfields redevelopment is to occur . One important issue raised in the paper involves the treatment of non-responsible parties, such as prospective purchasers, with regard to environmental liability. Should innocent new parties be expected to participate in brownfields redevelopment, if by doing so, they risk becoming responsible for all past and existing contamination?

New federal policies or laws giving liability protection to innocent prospective purchasers modeled on that given lenders in recent legislation could spur much new investment in brownfields properties. The financial ramifications of such action would, of course, need to be closely examined from both budgetary and economic standpoints.

**Non-Regulatory Barriers and Incentives**

The paper also looks at the issues of information needs with regards to brownfields sites and their contamination; the costs, credit risks, and financing approaches associated with cleaning up and reusing these properties; and the need for coordinated, timely action while allowing for serious public involvement.

Information regarding environmental contamination is a two-edged sword. One the one hand, accurate information is absolutely necessary in order to quantify costs, help determine the proper cleanup approach, and facilitate government regulatory action. On the other hand, any information regarding environmental contamination is a stigma to the property and may reduce or eliminate development opportunities.

Cleanup costs represent just another project development cost to a developer or investor. To the extent that these costs can be quantified and controlled by some form of liability protection or relief (insurance, government assistance, government assurance, etc.), then they can be managed. However, in highly competitive development markets, cleanup costs must either be counterbalanced by the value of some other attribute of the property or by some form of public subsidy.

The time frame within which other public regulators act is also of great importance to brownfields redevelopment. Time represents money to developers and investors. Coordination and cooperation between different levels of government and different regulatory agencies is critical if brownfields projects are to successfully compete with other development opportunities. If governments could ensure expedited and consolidated regulatory action with regard to brownfields properties, this could be a significant development incentive.

**Next Steps**

The activities undertaken to date by federal, State, and local governments and the private sector represent a good beginning to addressing the brownfields problem. But, strong new actions are needed if we are to truly stimulate the redevelopment of these properties. Further, the successful cleanup and reuse of brownfields will require a firm commitment and sustained effort from all parties involved, public and private.

EFAB clearly recognizes that this and its previous four brownfields financing reports have only begun to examine this complex and expensive environmental, economic, and social issue. Much more work is needed examining the financing aspects of brownfields cleanup and reuse. The Board is currently further examining specific brownfields barriers/problem areas and additional actions that governments and private parties can take to support this important and timely environmental priority.